

REMARKS/ARGUMENTS

Claims 1-42 stand rejected in the outstanding Official Action. Claims 1, 27, 31 and 35 have been amended and therefore claims 1-42 remain in this application.

The Examiner's acknowledgment of PTO acceptance of the previously submitted formal drawings is very much appreciated.

The Examiner objects to the title of the invention as not being descriptive of the claimed invention and proposes a revised title. The Examiner's proposed title has been adopted by the Applicants in the above amendment, thereby obviating any further objection to the specification.

Claims 1-26, as well as claims 27-42, are rejected under 35 USC §101 as being non-statutory. This contention is respectfully traversed for numerous reasons as follows.

In the rejection of claims 1-26 as allegedly being non-statutory, the Examiner alleges that they disclose a claimed invention that is an abstract idea as defined in the case of *In re Warmerdam*, 31 USPQ2d 1754 (Fed. Cir. 1994). However, the Examiner has simply misconstrued the holding in the *Warmerdam* case. That holding was clarified in the more recent decision of *AT&T Corp. v. Excel Com. Inc.*, 50 USPQ2d 1447 at 1454. Specifically, the Court held that, in *Warmerdam*, "the claimed process did nothing more than manipulate basic mathematical constructs and concluded that 'taking several abstract ideas and manipulating them together adds nothing to the basic equation'."

However, the *AT&T* case is a decision which more applicable to Applicants' independent claims 1 and 27. The *AT&T* case held that the claimed method for producing a message record for long distance telephone calls was enhanced by the addition of a primary interexchange carrier (PIC) indicator and thus constitutes patentable subject matter under §101. This was statutory

even though the PIC indicator value (a number) is derived from using simple Boolean mathematic principles (an algorithm). Because the Court held the PIC indicator represents useful, non-abstract results that facilitate differential billing of calls made by a subscriber to a long distance service carrier even though the process applied Boolean principles, it produced useful, concrete and tangible results without preempting other uses of the mathematical principle and it was clearly patentable subject matter. This is clearly set out in the *AT&T* decision at page 1453, section [2].

The *AT&T* case also notes that the more recent Patent Office requirement of requiring some stated "tangible result" is not "an invariable requirement, but merely one example of how a mathematical algorithm may bring about a useful application." Thus, a "tangible result" is not the single determining factor as to whether the claimed subject matter is statutory.

Applying the *AT&T* test to Applicants' claims, the claimed method involves producing software test information which, first of all, is clearly a "tangible result" of the method. The present invention is directed to a system for generating software test information by generating from a first sequence of instructions a corresponding sequence of generated instructions. Claim 1 specifies that instructions having a condition code are treated in a particular way in order to allow for more efficient testing of software. Specifically, step c) in claim 1 modifies step b) and states that where in step b) a determination is made as to "whether the condition code of said predetermined generated instruction is satisfied," if so, the step of "replacing said predetermined generated instruction with said corresponding instruction from said sequence of instructions so as to cause said corresponding instruction to be executed" takes place.

Thus, Applicants' claim is comprised of a series of steps which result in the production of software test information and specifies that instructions having a condition code are treated in a particular way. There is no doubt this is useful and, under the test set out in the *AT&T* case, produces a useful, concrete and tangible result "without preempting other uses of any mathematical principles used therein." As was held in the *Arrhythmia Research Tech. v. Corazonix Corp.* case, 22 USPQ2d 1033, 1039 (Fed. Cir. 1992), "that the product is numerical is not a criterion of whether the claim is directed to statutory subject matter."

Therefore, the Examiner's allegation that claims 1-26 are non-statutory in view of the *Warmerdam* case is simply a misapplication of the Federal Circuit's holding. However, Applicants have amended claim 1 to positively recite the end result, i.e., "thereby producing software test information" which is used for more efficient testing of software. In view of the above discussion and the amendment to claim 1, claim 1 and claims 2-13 dependent thereon are clearly statutory subject matter.

Independent apparatus claim 14 recites instruction logic and determination logic, but also recites "a target processor." It is noted that the last three lines of claim 14 reflect the same method step limitation as recited in claim 1, and the recitation of this method step limitation in the claimed "determination logic" clearly encompasses the subject matter recited in claim 1 and discussed above. Accordingly, claim 14 positively recites structure (the target processor) and "logic" ("instruction generation logic" and "determination logic") and therefore is clearly statutory subject matter. Thus, independent claim 14 and claims 15-26 dependent thereon are clearly statutory subject matter.

The Examiner also argues that claims 27-42 are computer program product claims and therefore are non-statutory. In applying the *AT&T* holding to the subject matter of claims 27-42, it is clear that they meet the requirements of 35 USC §101. Notwithstanding the statutory basis for the claims, Applicants have amended independent claims 27 and 35 to recite that the computer program product comprises "a computer readable storage medium containing computer readable instructions" where such language has been accepted by the Patent Office as converting an alleged non-statutory "computer program product" claim into a statutory "computer program product" claim. The Examiner's attention is directed to U.S. Patent 6,836,860 and numerous other claims in issued patents using such claim language. While Applicants do not believe it to be necessary, the adoption of such language in independent claims 27 and 35 is believed to obviate any further rejection of claims 27-42 patentable under 35 USC §101.

Claims 1-42 stand rejected under 35 USC §112 (second paragraph) as allegedly being incomplete for omitting essential steps. While the Examiner cites no case law for this unusual holding, he does reference the Manual of Patent Examining Procedure (MPEP) Section 2172.01. The Examiner is apparently applying the first sentence in this section, i.e., "a claim which omits matter disclosed to be essential to the invention as described in the specification or in other statements of record may be rejected under 35 USC §112 (first paragraph) as not being enabling."

While the Examiner suggests that the current basis for the rejection of claims 1-42 is based upon the claims "being incomplete for omitting essential steps," the section of the MPEP does not say this and instead is directed towards the failure to include "matter which is essential to the invention." It is important to note that the MPEP specifically states that this essential

matter must be "described in the specification or in other statements of record." (MPEP Section 2172.01). While the Examiner alleges that "the omitted steps are: steps of testing software code, replacing code and steps for execution during run time etc.," he does not identify where these steps are **"described"** in Applicants' specification and even more importantly where these steps are alleged in the specification to be **"essential to the invention"** (emphasis added). Thus, the Examiner has failed to follow the MPEP Section 2172.01 requirements of identifying any support for his contention of steps being omitted and more importantly that those omitted steps are essential to the invention.

It is also noted that the MPEP Section 2172.01 cites the case of *In re Mayhew*, 188 USPQ 356 (CCPA 1976) as being the basis for its non-enabling interpretation under §112 (first paragraph). However, the *Mayhew* case was decided some 30 years ago and there have been subsequent cases by the reviewing Court of Appeals for the Federal Circuit which limit the *Mayhew* case to only the situation in which the specification says the claimed invention would not operate without the alleged missing steps or structures.

The Examiner's attention is directed to *Amgen Inc. v. Hoechst Marion Roussel Inc.*, 65 USPQ2d 1385, 1404 (Fed. Cir. 2003), wherein the Court decision in *Mayhew* was described as one "affirming examiner's rejection of claims not limited to having a cooling zone at the exit of a steel strip from a zinc bath because the specification indicated that without that cooling bath the invented process would not work." Thus, the breadth of the *Mayhew* case has been limited by the Court of Appeals for the Federal Circuit in a much more recent decision (issued four years ago) and this decision controls the interpretation of the *Mayhew* case.

Claims 1-42 stand rejected under 35 USC §103 as unpatentable over Favor (U.S. Patent 5,794,063) in view of Killian (U.S. Patent 6,760,888). This rejection is respectfully traversed, in that the Examiner's allegations regarding what is taught in the Favor reference, coupled with his admission of what is not taught in Favor, and his allegations of what is allegedly taught in the Killian reference and his failure to provide any reason or motivation for combining the references all establish that there is no *prima facie* basis for the allegation of unpatentability.

The Examiner alleges that Favor teaches Applicants' claimed "generating" step or apparatus. While Favor may teach some generic "generating" step, he does not teach the generating step set out in Applicants' independent claims. Specifically, the Examiner alleges that Favor at column 54, lines 10-12 discloses Applicants' claimed "generating" step and logic. While the Examiner correctly notes that the claim specifies

generating, from a sequence of instructions, at least one of which includes a condition code, a corresponding sequence of generated instructions, for selected instructions having a condition code the corresponding generated instruction being a predetermined generated instruction having a corresponding condition code,

the alleged disclosing passage in Favor, cited at column 54, lines 10-12 is merely a portion of claim 9. The cited portion in claim 9 recites "a plurality of first type macroinstruction decoders for simultaneously decoding a plurality of instructions in a predetermined group of first type instructions." This is completely silent with respect to anything related to "generating software test information" or to the processing of instructions "at least one of which includes a "condition code" or "selected instructions having a condition code" whereby the "corresponding generated instruction being a predetermined generated instruction having a corresponding condition code."

In basing the rejection upon Favor, the Examiner appears to have simply ignored the language of Applicants' claim and cited a generic "generating" step in the Favor reference without any thought as to whether the Favor reference discloses Applicants' claimed "generating" step and/or logic. Therefore, on this basis alone, the rejection of claims 1-42 under 35 USC §103 over the Favor/Killian combination fails.

The Examiner also alleges that Favor teaches Applicants' step c) which refers to a modification of step b), i.e., executing, on a target processor, said sequence of generated instructions. The Examiner suggests that the claim language of "replacing said predetermined generated instruction with said corresponding instruction from said sequence of instructions so as to cause said corresponding instruction to be executed" is disclosed in Favor at column 32, lines 34-39. Again, the claimed requirement (here of "replacing") is neither disclosed nor suggested in the Favor reference at the cited column 32.

Reviewing column 32, lines 34-39, Favor merely discloses a particular way of decoding a conditional branch instruction. Even if the microcode instruction of Favor was considered to be a counterpart of Applicants' claimed "corresponding generated instruction" and if the microcode instruction was a counterpart of an instruction in the original "sequence of instructions," Favor still does not disclose the claimed feature in claim 1. The Examiner provides no indication of how he interprets Favor so as to disclose the claimed subject matter and therefore has simply failed to meet his burden of establishing a *prima facie* case of obviousness.

It should also be noted that the Favor reference actually "teaches away" from replacing the predetermined generated instruction with an instruction from the original sequence by teaching that the microcode is executed by the processor rather than executing an instruction

from the original sequence, i.e., a predetermined generated instruction that has been replaced as taught in claim 1. As a result, Favor would clearly lead one of ordinary skill in the art away from Applicants' combination of method steps.

Moreover, the Examiner admits that "Favor doesn't teaches [sic] explicitly executing, on a target processor, sequence of generated instructions [sic]." This admission is very much appreciated and is also believed to be confirmation of the above-noted defects in the Favor reference.

While the statement of the rejection on page 4 indicates that the Examiner believes claims 1-42 to be obvious over Favor "taken with Killian et al USPN 6,760,888," the Examiner's statement at line 1 on page 5 of the Official Action is not understood. The Examiner states "[h]owever, Killian et al teaches (see summary of the invention, figures 3-6).[sic]" The Examiner does not indicate what he believes Killian teaches or which of the elements missing in Favor (as noted above) is recited in Killian. Does the Examiner contend that Killian supplies the "generating" step, the "executing, on a target processor" step or the modification of the execution step by "replacing said predetermined generated instruction . . . " step? The Examiner's failure to indicate what he contends Killian teaches is fatal to the Examiner's rejection.

Additionally, the Examiner's reference to the Killian "summary of the invention" and Figures 3-6 is simply insufficient for one to determine whether the Examiner's contention of Killian teaching something is actually shown in the reference. It is noted that Killian's summary of the invention extends between columns 6 to 8 and Figures 3-6 are four separate drawings. The Examiner's failure to specifically indicate what he believes Killian teaches or provide any specific indication of where that allegation is believed to be taught in the Killian reference is

believed to confirm that the Examiner is unable to find any teaching in the Killian reference which supplies the missing teachings in the Favor reference. Therefore, the rejection over the Favor/Killian combination is respectfully traversed, even assuming there is some reason for combining these references.

The Examiner does not provide any valid "reason" or "motivation" for combining the Favor and Killian references. This is required by the Court of Appeals for the Federal Circuit in obviousness rejections (see *In re Rouffet*, 47 USPQ2d 1453, 1457-8 (Fed. Cir. 1998)). The Examiner has provided no reason for combining the references. In fact, the Examiner ignores the above-noted fact that the Favor reference "teaches away" from replacing the predetermined generated instruction with an instruction from the original sequence because Favor teaches that the microcode is executed by the processor rather than executing an instruction from the original sequence. Thus, Favor would lead one of ordinary skill in the art away from Applicant's claimed combination.

In view of the above, i.e., the failure of Favor to teach the claimed method steps, the failure to identify any teaching in Killian which supplies any claimed method steps, the admission that Favor does not teach a portion of the claimed method, the failure to provide any "reason" or "motivation" for combining the references and the fact that Favor teaches away from the claimed combination, all combine to prove that there is no *prima facie* basis for obviousness of claims 1-42 under 35 USC §103 over the Favor/Killian combination. Inasmuch as independent claims 1, 14, 27 and 35 are not shown to be obvious under 35 USC §103, dependent claims 2-13, 15-26, 28-34 and 36-42 are similarly non-obvious. Any further rejection thereunder is respectfully traversed.

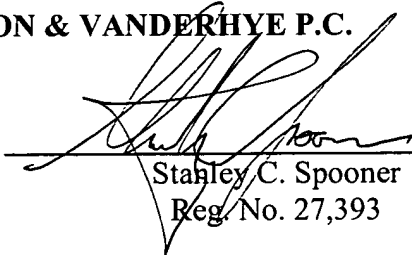
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Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that claims 1-42 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact Applicants' undersigned representative.

Respectfully submitted,

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